

Notice of Allowability

Application No.

10/563,978

Examiner

Edward Raymond

Applicant(s)

KOBE ET AL.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Oath/Declaration filed 7/3/06.
2. ☒ The allowed claim(s) is/are 20-37 and 39-43.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20061109</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>20060109</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the references and text in the drawings are not in the English Language. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Craig Hallacher on November 8, 2006.

The application has been amended as follows:

Claim 35 is replaced with the following text:

"35. A method for determining an internal pressure of a vehicle tire during driving comprising: analyzing characteristic vibration behavior of at least one wheel of the motor vehicle, wherein an amplitude maxima of a resonance frequency is observed from a determined vibration spectrum; determining and recording a theoretical

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resonance frequency of the wheel with a preset theoretical pressure; determining and storing in a memory of a maximum theoretical amplitude value at the theoretical pressure of the tire; determining an actual resonance frequency of the wheel during a driving operation; determining an actual maximum amplitude value during the driving operation; comparing the theoretical maximum amplitude and the actual maximum amplitude to determine a divergence of the actual maximum amplitude from the theoretical maximum amplitude; producing a signal if the divergence from the actual maximum amplitude and the theoretical maximum amplitude exceeds a defined value; and wherein the depth of the profile of the tire is taken into consideration in the assessment of the frequency curve in the driving operation.”

Claim 38 is cancelled.

Allowable Subject Matter

3. **Claims 20-37 and 39-43** are allowed.
4. The following is an examiner’s statement of reasons for allowance: Haralampu et al. teach a tire air pressure detecting device. The prior art of record does not teach a method for determining an internal pressure of a vehicle tire during driving comprising: determining and storing in a memory theoretical gradients of a frequency curve above and below the resonance frequency; forming a theoretical ratio from the gradients; continuously determining an actual resonance frequency of the wheel during a driving operation; continuously determining actual gradients of the frequency curve above and below the operational resonance frequency; forming an actual ratio from the actual gradients; comparing the theoretical ratio and the actual ratio to determine a divergence

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of the actual ratio from the theoretical ratio; and producing a signal if the divergence from the actual ratio to the theoretical ratio exceeds a defined value.

The prior art of record does not teach wherein the depth of the profile of the tire is taken into consideration in the assessment of the frequency curve in the driving operation.

The prior art of record does not teach determining theoretical internal tire pressure in a theoretical condition in dependence on a rotational rigidity and rotational damping, wherein parameters that take into account tires that are typical for the vehicle are referred to.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haralampu et al. teach a tire air pressure detecting device. Toninaga et al. teach a tire air pressure detecting device. Gustafsson et al. teach a tire air pressure detecting device. Ohashi et al. teach a tire air pressure detecting device.

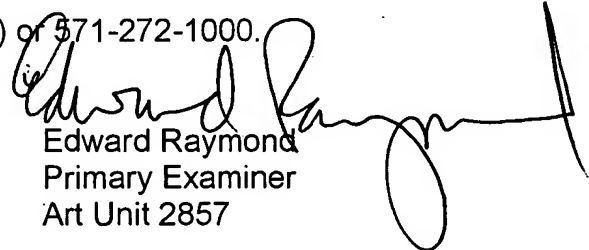
Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Raymond whose telephone number is 571-272-2221. The examiner can normally be reached on M-F 8:30-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Edward Raymond
Primary Examiner
Art Unit 2857

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